

2007-2008 Preliminary Influenza Season Summary

Background

Influenza is a highly contagious viral respiratory illness that affects the health of large numbers of people every year. On average, influenza is annually associated with more than 36,000 deaths and more than 200,000 hospitalizations. In Missouri, influenza and pneumonia are associated with approximately 1,500 - 3,000 deaths per year. The economic impact of influenza illness is staggering. Studies have shown that in an average year, direct and indirect medical costs in the U.S. are in the billions.

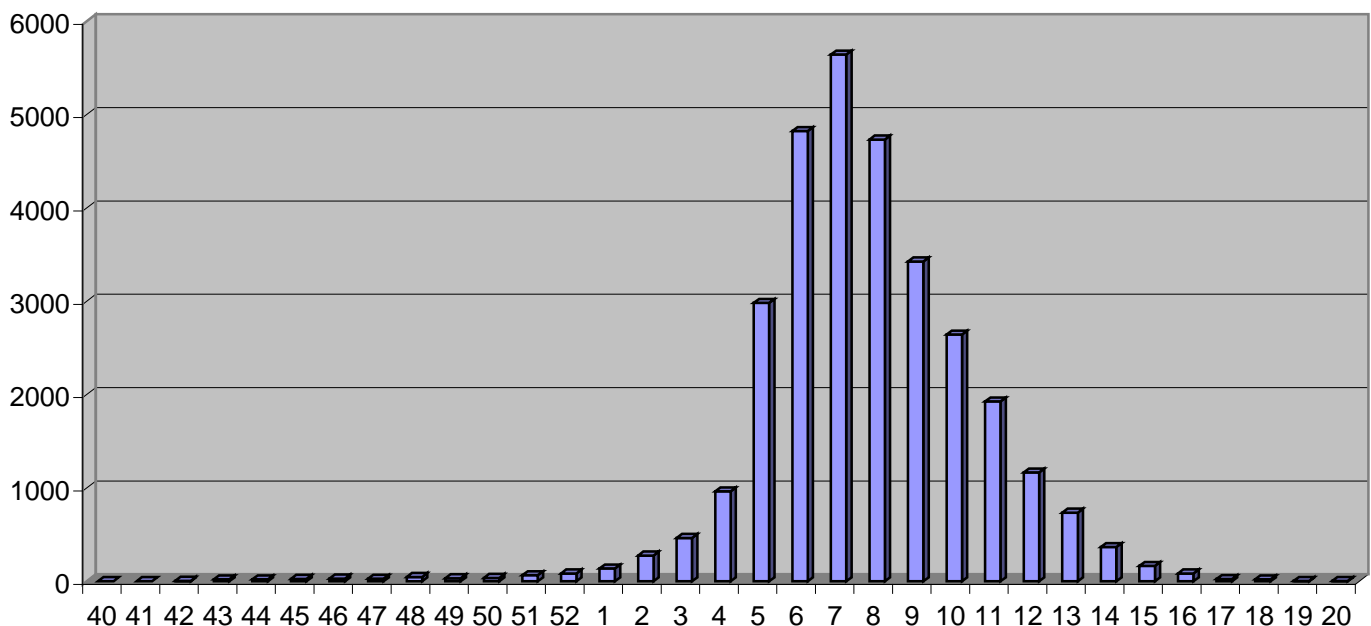
Although influenza does not appear on the list of nationally notifiable diseases/conditions, due to the vast health and economic impacts and the continuous mutation of current strains, the Department of Health and Senior Services has chosen to work to track/monitor the incidence of human influenza in Missouri. Missouri is one of very few states that collect individual influenza case data. With worldwide concerns regarding the emergence of avian influenza and its potential pandemic spread to the human population, Missouri will continue to monitor influenza in humans. Influenza is included as a reportable condition in the DHSS reporting rule [19 CSR 20-20.020](#).

Influenza data is collected by season as rather than by calendar year due to the fact that influenza is a seasonal illness. Each influenza season begins in early October (Week 40) of one calendar year and ends in late May (Week 20) of the next calendar year. Weeks are based on the CDC calendar, which calculates a week from Sunday through Saturday. A weekly report is produced using a variety of data from MOHSIS (where individual case data as well as summary case data is collected), the State Public Health Laboratory, and other sources.

2007-2008 Influenza Season – Final Case Count = 30,978

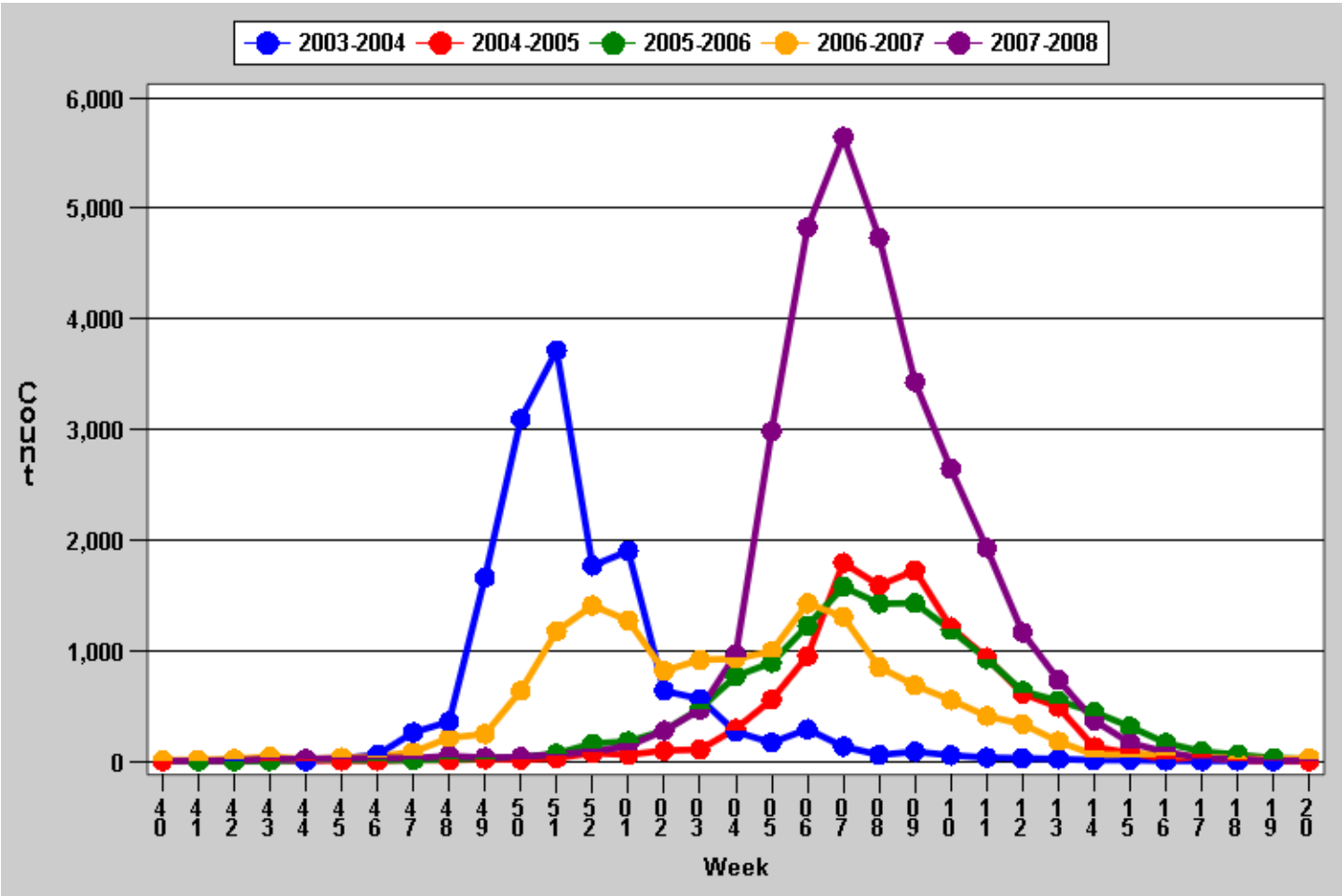
The 2007-2008 season showed low levels of influenza activity from October through mid-January (Week 40-Week 3). Activity increased slowly toward the end of January, with a more rapid increase during February and then slowly declining through the week ending March 22 (Week 4-Week 12). Influenza activity peaked in mid-February (Week 7).

**Graph 1. Influenza Season-to-Date
Through Week Ending May 17, 2008 (Week 20)**



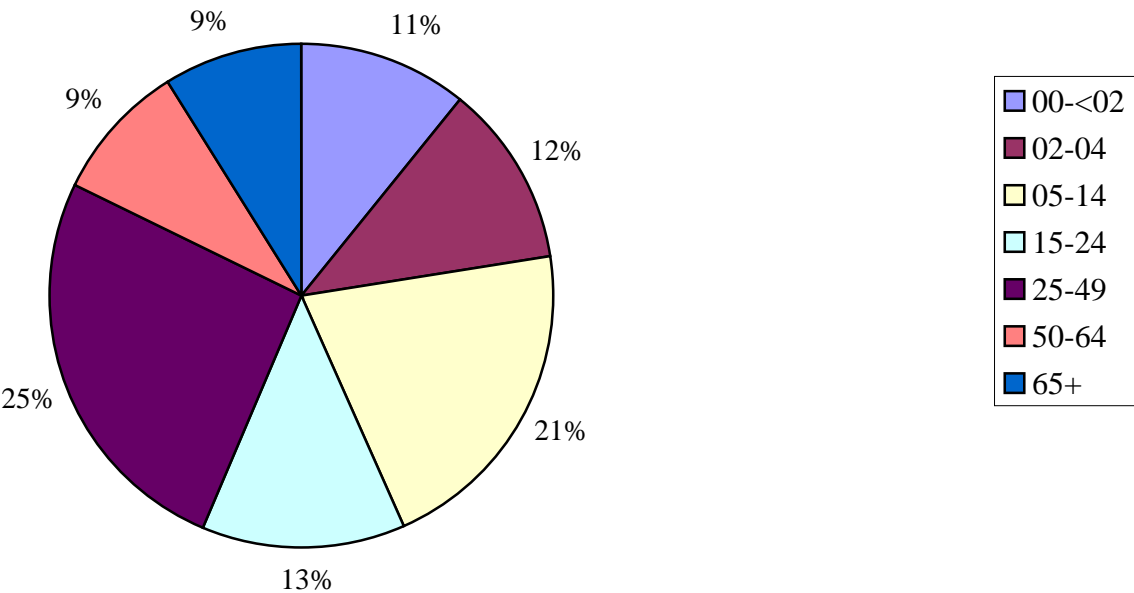
The case distribution of the 2007-2008 influenza season resembled the 2004-2005 season in the weeks where the peak occurred. (Graph 2).

**Graph 2. Influenza 2007-08 Season-To-Date as compared to the previous 4 influenza seasons
Through the Week Ending May 17, 2007 (Week 20)**



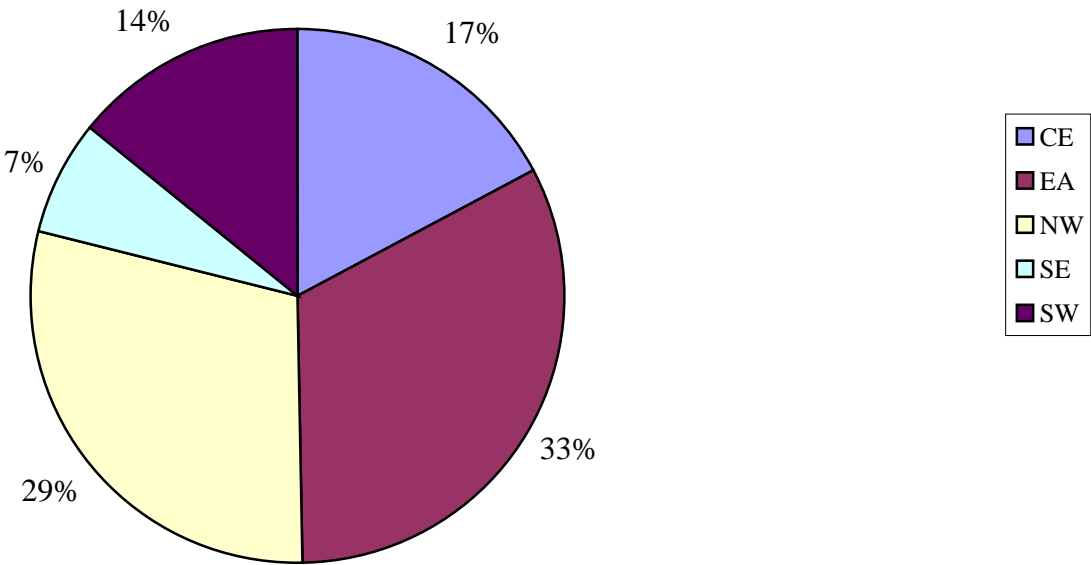
Influenza A viruses predominated the 2007-2008 season with 57.2% of cases and affected all age groups. The highest number of laboratory-confirmed influenza cases (25%) were those aged 25-49 years. The group with the next highest percentage of reported laboratory-confirmed influenza cases (21%) were those aged 05-14 years. The lowest percentage (9%) was reported among those aged 50-64 years and 65+.

**Graph 3. Influenza Season-to-Date by Age Group
Through Week Ending May 17, 2008 (Week 20)**



The region with the highest number of laboratory-confirmed influenza (33%) was Eastern District. The region with the next highest percentage of reported laboratory-confirmed influenza (29%) was Northwest District. The lowest percentage (7%) was Southeast District.

**Graph 4. Influenza Season-to-Date by District
Through Week Ending May 17, 2008 (Week 20)**



The number of cases for the 2007-2008 influenza season was higher than the previous four seasons. The number of cases has not been this high since 1975, when 44,367 cases were reported. Improved availability of rapid tests, increased testing by physicians, and improved reporting mechanisms may contribute to the increase in reported cases. The circulating strains of influenza were also not a perfect match for the vaccine, which may account for a large increase in reported cases.

In comparison to the previous four seasons, the 2007-2008 season was classified as one of the most severe influenza season Missouri has experienced (Table 1).

Table 1. Classification of Season, from 2003-2004 through 2007-2008 Seasons

Season	Case Count	Classification of Season
2007-2008	30,978	Severe
2006-2007	14,845	Moderate to Severe
2005-2006	12,960	Moderate to Severe
2004-2005	10,855	Moderate to Severe
2003-2004	17,834	Severe

Vaccine
A case controlled study performed in Wisconsin demonstrated that even though this season’s influenza vaccine was not a perfect match with the circulating influenza viruses identified in Wisconsin, it provided about 58% protection against the Influenza A (H3N2) strain. It provided little protection against the circulating Influenza B strain. Overall the vaccine provided approximately 44% protection.

CDC Advisory Committee Recommends Influenza Vaccination for Children 6 months through 18 years of age. A panel of immunization experts voted February 27, 2008 to expand the recommended ages for annual influenza vaccination of children to include all children from 6 months through 18 years of age. Studies have shown that healthy children bear a significant burden from influenza disease and are at increased risk of needing influenza-related medical care. In addition, there is evidence showing that reducing influenza transmission among children has the potential to reduce influenza among their household contacts and within the community. Full implementation by Fall 2009 at the latest will allow time to plan for the vaccination of this large group of children. Immunization providers should begin efforts to offer influenza vaccination to all children aged 6 months through 18 years in the 2008-09 influenza season if feasible. www.cdc.gov